

ASSISTIVE TECHNOLOGY, EMOTIONAL DEVELOPMENT, AND SUPPORTING CHILDREN WITH SEN



HEALTH PROFESSIONALS FOR SAFER SCREENS



VISIT HPSS

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INTRODUCTION

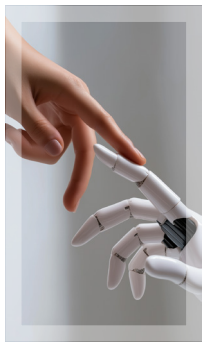
When we talk about assistive technology (AT) for children with special educational needs, it's really important that people understand what it actually is and what it's designed to do. It isn't just about giving children gadgets or apps; **it's about helping them access learning in a way that supports their development**, without accidentally taking away opportunities they really need.

There's so much misunderstanding out there, especially around screens, emotional regulation, and now AI, and these misunderstandings can genuinely impact a child's long term learning and wellbeing. So this is a broad overview to help make sense of some of the key issues.

DIFFERENT TYPES OF ASSISTIVE TECHNOLOGY

Assistive technology in schools generally falls into **two categories**, and they work in very different ways.

1. Permanent Assistive Technology



Some children with long term physical, medical, or lifelong disabilities genuinely **need AT as a permanent part of their everyday life**. It's a bit like wearing glasses: you don't "grow out of" needing to see clearly, so the glasses stay.

This kind of AT doesn't aim to build a skill the child will later use independently. It supports a need that is always going to be there.

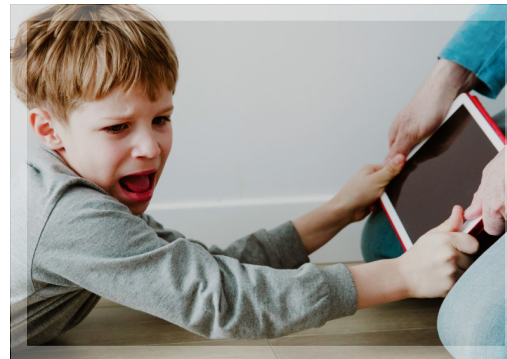
2. Temporary or Reducing Assistive Technology



But for many children in schools, AT should be something that *supports them while they're developing a skill*, **not** something that replaces the skill altogether in the long term.

Scaffolding learning through AT means giving a child just enough support to help them take the next step in their learning, without doing the whole task for them. When we talk about scaffolding in relation to assistive technology, we mean using tools that temporarily "hold up" a skill the child is still developing. The idea is that the assistive tech makes

the task achievable right now, but over time, as the child grows in confidence and ability, that support is slowly reduced and eventually removed. It's a bit like giving a child stabilisers on a bike — they're there to help at first, but the long term goal is always for the child to pedal independently.



If AT is always accessible, especially on a child's personal device, it stops being scaffolding and becomes a shortcut. And shortcuts might make things easier in the moment, but they can slow down development in the long run.

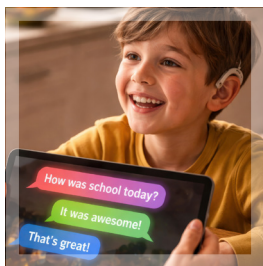




WHY MONITORING AND OVERSIGHT MATTER SO MUCH

One thing I really can't stress enough is that assistive technology in schools needs to be:

- Introduced thoughtfully
- Monitored regularly
- Adjusted as the child develops
- Removed gradually if it's meant to be temporary



This is exactly why AT should not sit on a child's own phone or personal tablet. If they can open it anytime, anywhere, the adults supporting them **lose the ability to track how much they're using it**, or whether they're relying on it instead of building the skill that the AT was meant to support.

Children don't always know when they're ready for the next challenge, but trained adults (specialist teachers, SENCOs and educational psychologists) can spot those moments and gently help them move forward. Without monitoring, **we risk freezing development at its current stage**, even when the child is capable of more. Over time, children and young people with SEN can begin

to decide for themselves when they would like to use assistive technology to scaffold their learning needs, but not until they are fully ready to be given that level of independence.

For example, using AT to replace reading altogether isn't helpful. A child won't build reading fluency without actually reading. So AT for dyslexia needs to be used carefully, with a clear purpose, and always alongside proper reading intervention, not instead of it.

DYSLEXIA: WHY CHILDREN NEED MORE READING, NOT LESS

When it comes to dyslexia, there's a big misconception that because reading is hard, children should do less of it. It's actually the opposite.



Children with dyslexia need more practice, more exposure to printed words, and more high quality reading intervention. And yes, it's really important that a lot of this is with real books and paper, not screens. The brain processes text differently on paper than it does on digital devices, and printed text tends to create a richer reading environment. **Reading from real books matters** because:

- Printed text is processed differently in the brain compared to text on screens.
- Paper-based reading environments provide richer linguistic cues.
- Eye movement, attention, and memory systems work more effectively with physical text.





However, assistive technology like text to speech readers can be brilliant in lessons where the learning goal isn't reading. If the goal of the lesson *is to learn facts about* the Romans or volcanoes or photosynthesis, the child shouldn't miss out on the content just because the reading level is inaccessible. In those situations, AT levels the playing field.

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ASSISTIVE TECHNOLOGY FOR ADHD

Children with ADHD often find the “organising” parts of learning the hardest. Things like planning ahead, remembering instructions, keeping track of homework, prioritising what to do first - all of these fall under executive functioning, and for many children with ADHD those skills don't develop easily/naturally within their neurological systems. That's where assistive technology can make a really meaningful difference, as long as it's used intentionally and not as a replacement for the child learning those skills over time.

How Screen Based Assistive Technology Can Help



Digital tools can be genuinely helpful for children with ADHD because **they make the invisible parts of learning much more visible**. When the steps, reminders, or priorities are clearly laid out in front of them, everything feels more manageable.

Some examples of really effective digital supports include:



Digital homework planners

These allow teachers to update task lists in real time, move things up or down the priority list, and remove anything that's no longer needed. For a child who becomes overwhelmed by unclear expectations, having the teacher digitally reorganise what needs doing can feel like a huge relief.

Visual timers and countdown apps

These can help children start tasks (which is often the hardest part). A simple five minute countdown can reduce avoidance and make the first step feel achievable.

Step by step task organisers

Apps that break a task down into chunks: “First: open your book... Next: copy the title... Then: answer question 1...” — can help children stay on track without constantly needing an adult to prompt them.

Reminder tools and alerts

These support working memory by gently nudging the child when it's time to switch task, pack up, hand something in, or check their planner.

All of these digital tools can be brilliant because they **reduce some of the everyday cognitive load that children with ADHD carry**. And the emotional impact matters too: when a child experiences “small wins” consistently, their confidence and willingness to try increases over time.



Why analogue (non digital) approaches still matter

While digital tools are helpful, analogue supports can be just as powerful, and sometimes even better for certain children or certain contexts. A lot of children with ADHD benefit from tangible, physical systems because they are concrete and easier to process cognitively.

ASSISTIVE TECHNOLOGY FOR AUTISM

For autistic children, social communication needs are often central. Assistive tools like communication boards, symbol systems, or tablet based communication apps can make a huge difference in helping a child express what they want or need as these communication systems provides a structured, visual method for expressing wants, needs, and ideas. These tools:



- Are well evidenced
- Support speech and language development
- Reduce frustration
- Expand opportunities for interaction

These tools are well researched and genuinely supportive.

But it's important to say that **paper versions can be just as effective**, depending on the child and the setting. Some schools use Velcro based books with symbols that can be moved around, and these work perfectly well for many children.

The main reason why digital systems are sometimes preferred is simply that they can offer a far wider range of vocabulary, with multiple pages and categories. But they are also more expensive and therefore less accessible for some families and schools. A paper system is absolutely valid, especially when funding is a barrier or when a child responds better to something tangible.

The key is that the social communication support (whatever form it takes) is **monitored, adjusted, and built into the child's everyday routines**. It shouldn't just be handed over for unlimited access without adult support.

SCREENS AND EMOTIONAL DYSREGULATION: WHY "CALMING WITH SCREENS" IS HARMFUL

A major area of concern is the widespread belief that screens help emotionally dysregulated children "calm down." Parents (and teachers) of children with SEN face immense challenges, and **compassion for that reality is essential**. Watching a child's external/behavioural signs of distress stop creates a parent's belief that the child 'looks' regulated and seems no longer upset, a powerful reinforcer for the use of screens. Screens therefore become a way to calm the person who cares for the child and give them a 'moment of peace' from worry.

However in reality:

Screens do not regulate emotions. They distract the child or young person from the physiological discomfort that the emotions bring.

When a child is overwhelmed (by noise, transitions, sensory overload, or an emotionally distressing situation) giving them a screen may make them look calm, but, biologically, the process of giving a screen in these moments prevents the child from:



- Learning what anxiety feels like in their body
- Learning that this feeling eventually goes away
- Building tolerance for discomfort
- Developing co-regulation skills with a trusted adult
- Practicing emotional problem-solving
- Forming the neural pathways needed for lifelong resilience



For children with SEN, who often need more support to develop these emotional pathways, **screen-based avoidance can be particularly damaging**. Repeated patterns of screen distraction during emotional moments interrupt the natural developmental processes that teach children how to cope with stress.

The myth that screens “calm” children is harmful.



Transitions (leaving the house, boarding the bus, eating lunch, stopping play, moving toward bedtime) are especially important opportunities for developing emotional tolerance. Using screens during transitions remove these opportunities for development entirely.

EMOTIONAL DEVELOPMENT AND COGNITIVE DEVELOPMENT: DEEPLY INTERCONNECTED

Emotional development is inseparable from cognitive development. The systems that help children regulate emotions (working memory, executive function, sequencing, inhibition control) are the same systems they use to:



- Solve tricky problems
- Think critically about their life goals
- Reflect on difficult experiences
- Make hard decisions
- Navigate awkward social situations

Strong emotional regulation supports strong cognitive growth, and vice versa. When a child with SEN avoids emotional discomfort through screens or through over-reliance on AT, their cognitive development can be affected because they are not engaging the mental processes needed to work through difficulty.

WHY WE NEED TO BE CAREFUL WITH AI

This relationship is also central when considering the use of AI. Tools that do thinking for the child, e.g. summarising, planning, generating ideas, risk interrupting the cognitive effort needed to strengthen thinking skills. Children need to wrestle with problems, sequence thoughts, work things out, and attempt solutions. These experiences develop emotional resilience and emotional tolerance.

AI removes the struggle, and the struggle is the most important part.



Children develop cognitive and emotional skills by practicing them, daily, repeatedly, across many contexts, not by outsourcing them.

AI is still new in education, and we'll learn more as it develops. But right now, one of the concerns is that **AI takes away the opportunity for children to do the**

hard thinking that actually *builds* their brain.

Children need to:

- Get confused
- Think things through
- Sequence ideas
- Try out different possibilities
- Make mistakes
- Learn to persevere

If AI jumps in too early and does that thinking for them, those crucial cognitive muscles don't get exercised.

So AI might have a place one day, but at the moment, we need to be very cautious, especially for children with SEN who already need more support/practice with executive functioning and emotional development.



FINAL THOUGHT

This isn't a complete guide, and it doesn't cover every single tool available, because the field is huge and constantly growing. But these are some of the big themes and common issues that come up again and again in schools, and understanding them really helps people **make more informed decisions for the children they support.**



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